

REMARKS

Claims 1-25 are pending in the application after this amendment. The amendment and/or addition of claims is not to be considered in any way an indication of applicant's position on the merits of the amended, added, and/or original claims. In the following sections of the Amendment the rejections set forth by the Examiner in the June 28, 2005, Office action are addressed. These rejections are respectfully traversed, and detailed arguments are set forth below.

As a preliminary matter, all of the claims are subject to a double patenting rejection over issued patent (U.S. Patent No. 6,673,063). Applicant has filed a statutory disclaimer to overcome this rejection.

The Examiner rejected claim 22 under 35 USC §112, first paragraph. The Examiner states that the written description requirement has not been met. Specifically, the Examiner rejected claim 22 stating that the claim limitation "calculating an amount of energy needed to refurbish thermally said at least one intervertebral disc" did not have support in the disclosure. The Examiner states that the original disclosure is silent as to the various factors needed and the manipulations thereof required for this step. This rejection is respectfully traversed. Applicant disclosed this claim element at page 22, lines 9-11 ("The extent of disc injury is evaluated and the amount of energy needed to refurbish thermally the disc is calculated 120.") and also in FIG. 3. One of ordinary skill in the art would have been able to implement this step based on the disclosure.

The Examiner rejected claim 4 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. More specifically, the Examiner rejected claim 4 stating that the exact meaning of the term "heat generation layer" is unclear. This rejection is respectfully traversed. The original specification states that the a layer may contain the energy applicators. This can be found at page 15, lines 8-12:

"In one preferred embodiment, the ribbon head 800 is layered in that it includes a bottom layer 802, an optional middle layer 804, and a top

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layer 806. . . . In one preferred embodiment, the bottom layer 802 may contain the energy applicators"

The original specification also specifies that energy applicators may include one or more lasers 420, fiber-optic strands 430, lenses 440, electrodes 450, wires 460, light bulbs 470, heating elements 480, and ultrasound transducers 490. (Page 17, lines 1-3.)

Finally, the original specification specifies that the energy applicator may be supplied with energy from a source external to the head or may generate or convert energy within the head. (Page 17, lines 6-14.) The claimed "heat generation layer" would be a layer that contained energy applicators that generate or convert energy within the head.

The Examiner rejected claims 1-8 under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,785,705 to Baker (the "Baker reference"). The Examiner also rejected claims 1-16 and 18-21 under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,482,204 to Lax et al. (the "Lax reference"). It should be noted that the Examiner did not specify the Lax reference over which he was specifically rejecting the claims, but a review of the rejection indicates that this is patent is the reference upon which the Examiner is relying. Applicant respectfully requests confirmation that this assumption is accurate. The Examiner has rejected claim 22 under 35 USC §103 as being unpatentable over the Lax reference in combination with U.S. Patent No. 5,049,147 to Danon (the "Danon reference") and U.S. Patent No. 6,736,833 to Coleman (the "Coleman reference").

The Examiner did not substantively reject claim 17. A reasonable presumption is that the elements of claim 17 ("an inflatable portion for expanding and contracting said expandable and contractible energy application head") are patentable. Applicant has added new claims 23-25 which are dependent on claims 1, 18, and 21 respectively. These new claims all include the subject matter of claim 17 and should be allowable.

Claims 1-8, 11, and 20-21 all specific include the element of "ribbon-like." Applicant respectfully submits that the Examiner did not address this limitation in his rejections. The "ribbon-like" limitation is discussed in the original specification in

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conjunction with FIGS. 29-34. For example, the original specification sets forth "It should be noted that the terms "ribbon" and "ribbon-like" are meant to describe an elongated, relatively flat, flexible construction." (Page 17, lines 28-29.) Some of the advantages of this shape are also discussed in the original specification at page 14, lines 22-26:

"This shape allows simultaneous treatment of a large area of the posterior annulus. Further, the treatment may occur in an automated fashion. For example, once positioned, the ribbon head 800 may be left in place across the posterior annulus to treat a large area. This can be compared to the previously discussed embodiments that must be manipulated and/or "painted" on posterior annular surface to treat a large area."

None of the references teach or suggest this construction. Applicant respectfully submits that these claims, and the claims that depend therefrom, are allowable because none of the references teach or suggest at least one of the claimed features.

The Examiner does not appear to have addressed the structure claimed in claim 8. None of the known references show "a bottom layer having a heat generator therein" or "a middle layer providing thermal insulation." Applicant respectfully submits that this claim is allowable because none of the references teach or suggest these features.

Finally, the Examiner appears to be taking the position that since the devices described in the Baker and Lax references can expand or contract with temperature, a broad claim to expanding and contracting is anticipated. There is no specific recitation of this feature in the Baker and Lax references themselves. Even assuming that this is an inherent characteristic of a prior art reference (which applicant is specifically not admitting), the references do not teach or suggest at least some of the specific claimed features. For example, claims 9, 13-16, and 18 all specify that the variable distance is the distance between the energy application region and the tissue protecting region. Applicant respectfully submits that if this rejection is to be maintained

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that the Examiner provide clarification of where this feature is taught or suggested in the cited references.

In view of the above, it is submitted that the currently pending claims are patentable. Accordingly, the Examiner is requested to reexamine the application, to allow the claims, and to pass the application on promptly to issue.

A Petition for Extension of Time for one month is enclosed herewith.

Please charge Deposit Account No. 50-2115 for any additional fees that may be required.

Respectfully submitted,



Karen Dana Oster
Karen Dana Oster
Reg. No. 37,621
Of Attorneys of Record
Tel: (503) 810-2560